Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	§	
	§	PS Docket No. 11-60
Public Safety and Homeland Security Bureau Seeks Comment on the Effectiveness of the Wireless Network Resiliency Cooperative Framework and for the Study on Public Access to 911 Services During Emergencies	§	

COMMENTS OF NENA: THE 9-1-1 ASSOCIATION

NENA: The 9-1-1 Association[1] hereby submits these comments in response to the Commission's Public Notice ("Notice")[2] in the above-captioned proceeding. In these comments, NENA emphasizes that significant further discussion should take place with regard to 9-1-1 access over Wi-Fi, specifically in the areas of network access policies, call routing, and caller location.

1. Wi-Fi calling can expand access to 9-1-1, but technical and operational questions abound.

The Commission and the relevant stakeholders need a firmer understanding of the policies and procedures that shape how users access the internet — and thus 9-1-1 — through managed Wi-Fi hotspot deployments. While increasing access to 9-1-1 is the utmost priority for NENA, significant questions stand between the status quo and successful implementation of 9-1-1-over-Wi-Fi.

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[1] NENA: The 9-1-1 Association improves 9-1-1 through research, standards, development, training, education, outreach, and advocacy. Our vision is a public made safety and more secure through universally-available, state-of-the-art 9-1-1 systems and trained 9-1-1 professionals. NENA is the only professional organization solely focused on 9-1-1 policy, technology, operations, and education issues.

[2] *See* PUBLIC SAFETY AND HOMELAND SECURITY BUREAU SEEKS COMMENT ON THE EFFECTIVENESS OF THE WIRELESS NETWORK RESILIENCY COOPERATIVE FRAMEWORK AND FOR THE STUDY ON PUBLIC ACCESS TO 911 SERVICES DURING EMERGENCIES, PS Docket No. 11-60, Public Notice (rel. June 13, 2018) (hereinafter "Notice").

2. Wi-Fi hotspot deployments likely require a more detailed taxonomy, with emphasis on the methods by which users may access these hotspots.

The Commission requests comment on making managed Wi-Fi access points — both those owned by telecommunications service providers and those owned by other non-provider entities — available for use by consumers as a means to call 9-1-1 via Wi-Fi when traditional CMRS service is unavailable. As a threshold matter, NENA feels it is most useful to break this broad category of managed Wi-Fi access point deployments down into multiple distinct groups.[3,4]

We first distinguish those Wi-Fi hotspot deployments owned by wireless telecommunications service providers, such as those owned by AT&T.[5] Theoretically, these deployments offer the most seamless transition from CMRS to Wi-Fi for their respective users, as account management and authentication can be managed using the unique identifiers of the mobile devices already registered on the carriers' networks. A second category consists of managed Wi-Fi hotspots owned by traditional wireline telecommunications service providers such as those owned by Comcast[6] These hotspot deployments offer large aggregate coverage areas similar to those provided by Verizon and AT&T, but may require authentication via a splash page for those devices and users not already registered on their networks. A third category, "retail" Wi-Fi hotspots, consists of hotspot deployments owned by non-carriers such as Hilton Hotels.[7] Access to these networks almost always requires some form of authentication by the user, and may lack

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[3] For the purposes of these comments, we use the term "deployments" to refer to the collective hardware and coverage areas of network access points installed by providers. The term "networks," as it is used in these comments, refers to the internet access delivered to users by the owners of these deployments.
[4] For the purposes of these comments, "access point" and "hotspot" are interchangeable. Both refer to hardware that allows client devices to access the internet wirelessly through use of the IEEE 802.11x™ standard (http://www.ieee802.org/11/), also known as Wi-Fi® (https://www.wi-fi.org/).
[5] *See* "Connect to an AT&T Wi-Fi Hot Spot or public Wi-Fi" (https://www.att.com/esupport/article.html#!/wireless/KM1103818).
[6] Comcast's Xfinity Wifi offers customers access to "millions of WiFi hotspots nationwide, included with Xfinity Internet service at no additional cost." (http://wifi.xfinity.com/)
[7] See generally Hilton Honors (http://www.hhonors.com).

the level of nationwide network authentication management a user can expect from managed hotspot networks owned by carriers.

It is crucial that stakeholders understand the method by which users access the networks in question. Thus, the Commission should request that carriers detail the relative difficulty of safely and reliably "opening" their Wi-Fi networks for use as 9-1-1 connections in areas affected by a widespread emergency or disaster.

3. The Commission should investigate how Wi-Fi 9-1-1 calls are routed

Wi-Fi calling has increased in frequency as users retire their home "landline" connections and wireless carriers seek to offload bandwidth to Wi-Fi networks, which are comparatively better for bandwidth than for coverage.[8] However, the vast majority of 9-1-1 calls are still carried over CMRS networks. This policy is likely due to the greater coverage and reliability of CMRS networks vis a vis their Wi-Fi counterparts as well as the lack of industry-wide standard procedures for routing Wi-Fi calls in CMRS-less environments.

As stated by the Texas 9-1-1 Entities, different carriers appear to have different routing policies for non-CMRS 9-1-1 calls.[9] Verizon appears to follow a protocol similar to AT&T's, routing based on Registered Location only "where cellular service isn't available."[10] Verizon further clarifies that 9-1-1 calls "will always try cellular service in the local market first, even when the device is in Airplane Mode or cellular services is off."[11]

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[8] *See* "T-Mobile boasts of its Wi-Fi calling usage in response to AT&T's claims," (https://www.fiercewireless.com/wireless/t-mobile-boasts-its-wi-fi-calling-usage-response-to-at-t-s-claims).
[9] *See* COMMENTS OF THE TEXAS 9-1-1 ENTITIES, PS 11-60 (Jul. 16, 2018) ("Texas 9-1-1 Comments")
[10] "Wi-Fi Calling FAQs," Verizon Wireless (https://www.verizonwireless.com/support/wifi-calling-faqs/).
[11] *Id.*

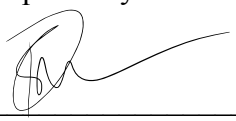
4. The Commission should investigate how carriers can achieve Dispatchable Location for Wi-Fi calling

Dispatchable location will, for the foreseeable future, be the gold standard for location accuracy; the Commission should seek to understand carriers' ability to deliver dispatchable location from Wi-Fi 9-1-1 calls. Wi-Fi hotspots, when owned or leased by a single residential user, are likely to be associated with a civic address — that of the subscriber. However, the carrier databases containing that civic address are not likely used to feed the ALI and ANI databases currently providing location data for 9-1-1.

5. Conclusion

NENA thanks the Commission for the opportunity to comment on this important matter and looks forward to engaging with stakeholders in the 9-1-1 community to work toward expanding the scope and accessibility of 9-1-1, and the pursuit of nationwide NG9-1-1.

Respectfully submitted,



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